

ABSTRACT

A surface acoustic wave filter which has a balance-unbalance converting function and which can improve the degree of balance, and a communication apparatus including the filter are provided.

In a longitudinally-coupled-resonator surface acoustic wave filter unit 501 having a first interdigital transducer 503, a central interdigital transducer 504, a second interdigital transducer 505, and first and second reflectors 506 and 507 by which the interdigital transducers are provided therebetween, for one comb electrode of the central interdigital transducer 504, first and second comb electrodes 516 and 517, which are substantially symmetrically bisected along a surface-acoustic-wave propagation direction, are provided. Between the first and second comb electrodes 516 and 517, in one side and the other side around an imaginary central axis A assumed to be orthogonal to the surface-acoustic-wave propagation direction, a design parameter of at least one of the interdigital transducers 503, 504, and 505, and the reflectors 506 and 507 is set to differ.

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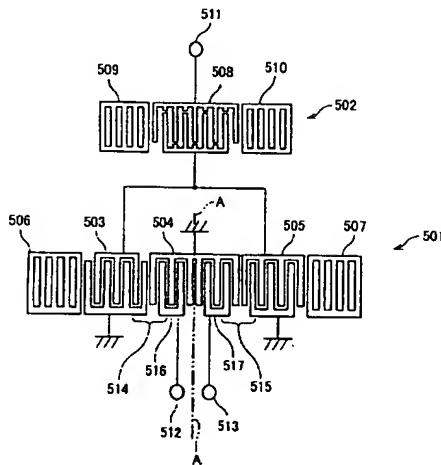
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(54) Title: SURFACE ACOUSTIC WAVE FILTER AND COMMUNICATION UNIT

(54) 発明の名称: 弹性表面波フィルタ及び通信機



**A1** (57) **Abstract:** A surface acoustic wave filter having a balance/unbalance converting function for improving the degree of balance, and a communication unit comprising it. A longitudinal coupling resonator type surface acoustic wave filter section (501) comprises a first interdigital electrode part (503), a central interdigital electrode part (504), a second interdigital electrode part (505), and first and second reflectors (506, 507) sandwiching them. One comb-shaped electrode at the central interdigital electrode part (504) is divided substantially symmetrically into first and second comb-shaped electrodes (516, 517) along the propagating direction of surface acoustic wave. Between the first and second comb-shaped electrodes (516, 517), at least one of design parameters of the interdigital electrode parts (503, 504, 505) and the reflectors (506, 507) is differentiated between one and the other sides sandwiching an imaginary central axis A orthogonally intersecting the propagating direction of surface acoustic wave.

(57) **要約:** 平衡-不平衡変換機能を有し、平衡度を改善することができる弹性表面波フィルタおよびそれを有する通信機を提供する。 第1くし型電極部503、中央くし型電極部504及び第2くし型電極部505と、それらを挟む第1、第2リフレクタ506、507とを有する縦結合共振子型弹性表面波フィルタ部501、中央くし型電極部504の一方のくし歯状電極に、弹性表面

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